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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/223,729	12/31/98	SAW Y	K-074

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EXAMINER	
LOGSDON, J	
ART UNIT	**PAPER NUMBER**
2662	4

DATE MAILED: 07/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/223,729	SAW, YOO SOK	
	Examiner	Art Unit	
	Joe Logsdon	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claim Rejections—35 U.S.C. 112, Second Paragraph:

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12 and 20 contain the trademark/trade name CONTRAXPAND™. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a buffer and, accordingly, the identification/description is indefinite.

Claim Rejections—35 U.S.C. 102(e):

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis et al. Davis et al. discloses a method and system, in a data processing system, for retransmission of only a portion of a data packet that had originally been sent incorrectly (abstract). The invention is useful for multimedia, and is therefore useful for video (column 3, lines 35-40). The transmitting computer system inherently has an encoder, and the receiving computer system inherently has a decoder. The data is inherently stored in a buffer, for, otherwise, it could not be retransmitted. A plurality of data packets are transmitted from one computer system to another; the receiving computer system determines whether any of the received packets were transmitted incorrectly, and, if so, the receiving computer system determines which portions of each incorrectly received packet were received incorrectly; the receiving computer system transmits an echo packet that identifies the portions that were received incorrectly; and in response, the transmitting computer system transmits only the portions of each packet that were received incorrectly (claim 3; column 4, line 62 to column 5, line 1). The retransmitted portions are packeted and transmitted as segment overlay packets (column 5, lines 24-28).

Claim Rejections—35 U.S.C. 103(a):

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3, 4, 7-11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al.

With regard to claims 4, 7, and 8, Davis et al. fails to teach that the echo packets contain memory addresses and size indicators corresponding to locations in memory, of variable size, at which the data to be retransmitted is stored; and that the data is stored in a circular addressing manner. A memory address with a size indicator constitutes a "range of block units" assuming the data is stored in contiguous memory locations. It would have been obvious to one of ordinary skill in the art to modify the invention of Davis et al. so that the echo packets contain memory addresses and size indicators corresponding to the locations in memory, of variable size, at which the data to be retransmitted is stored because such an arrangement would enable the transmitting computer system to easily retrieve the data without the need for performing any calculations. Examiner takes Official Notice that storing data according to a circular manner, e.g., on a disk, has been common practice in the art. It would have been obvious to one of ordinary skill in the art to store the data according to a circular addressing manner because such an arrangement has been common practice in the art as a means for allowing easy storage and retrieval of data.

With regard to claims 3, 9, and 15, Davis et al. fails to teach that the echo packet contains the range of DCT coefficients corresponding to the incorrectly received portion. Ran discloses a system that uses retransmission techniques for video transmission on mobile channels; the transmitter transmits parts of a frame, and the receiver requests retransmission of those portions

that contain errors (abstract). Ran teaches that discrete cosine transforms of the pixel values followed by quantization and run length coding reduces the bandwidth requirement (column 5, lines 53-61). It would have been obvious to one of ordinary skill in the art to modify the invention of Davis et al. so that DCT coefficients are used and the echo packet contains the range of DCT coefficients corresponding to the incorrectly received portion because such an arrangement would help to reduce the bandwidth requirement.

With regard to claim 10, Davis et al. teaches that the receiving computer system replaces only the received segments that had originally been received in error (column 4, lines 59-61); the receiving computer system therefore inherently checks whether the portions of the received retransmitted data packet had been requested.

With regard to claim 11, Davis et al. fails to teach that two buffers are used at the transmitting computer system, wherein one buffer is used for data that is to be transmitted for the first time, and the other buffer is used for data that is to be retransmitted. Davis et al. teaches, however, that initial transmissions and retransmissions take place on two independent links so that they do not interfere with one another (column 3, lines 58-61). It would therefore have been obvious to one of ordinary skill in the art to modify the invention of Davis et al. so that two buffers are used at the transmitting computer system, wherein one buffer is used for data that is to be transmitted for the first time, and the other buffer is used for data that is to be retransmitted, because such an arrangement would allow the initial transmissions and retransmissions to take place without interfering with each other.

7. Claims 13, 14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Langmann.

With regard to claims 13 and 14, Davis et al. discloses a method and system, in a data processing system, for retransmission of only a portion of a data packet that had originally been sent incorrectly (abstract). The invention is useful for multimedia, and is therefore useful for video (column 3, lines 35-40). The transmitting computer system inherently has an encoder, and the receiving computer system inherently has a decoder. The data is inherently stored in a buffer, for, otherwise, it could not be retransmitted. A plurality of data packets are transmitted from one computer system to another; the receiving computer system determines whether any of the received packets were transmitted incorrectly, and, if so, the receiving computer system determines which portions of each incorrectly received packet were received incorrectly; the receiving computer system transmits an echo packet that identifies the portions that were received incorrectly; and in response, the transmitting computer system transmits only the portions of each packet that were received incorrectly (claim 3; column 4, line 62 to column 5, line 1). The retransmitted portions are packeted and transmitted as segment overlay packets (column 5, lines 24-28). Davis et al. fails to teach that the data is compressed before transmission. Langmann discloses a method for repeating data that is transmitted incorrectly; the method comprises the steps of dividing a data stream into data words that are stored in a buffer, and data words that are received incorrectly are retransmitted (abstract). Landmann teaches that the method is applicable to encoded, and possibly compressed video and/or audio data (column 1, lines 58-64). It would have been obvious to one of ordinary to modify the invention of Davis et al. so that video and/or audio data is compressed before transmission, as taught in Langmann

because compression of video and/or audio data allows the redundancy inherent in the data to be exploited to increase the rate of information transfer.

With regard to claims 16 and 17, Davis et al. fails to teach that the echo packets contain memory addresses and size indicators corresponding to locations in memory, of variable size, at which the data to be retransmitted is stored; and that the data is stored in a circular addressing manner. A memory address with a size indicator constitutes a "range of block units" assuming the data is stored in contiguous memory locations. It would have been obvious to one of ordinary skill in the art to modify the invention of Davis et al. so that the echo packets contain memory addresses and size indicators corresponding to the locations in memory, of variable size, at which the data to be retransmitted is stored because such an arrangement would enable the transmitting computer system to easily retrieve the data without the need for performing any calculations. Examiner takes Official Notice that storing data according to a circular manner, e.g., on a disk, has been common practice in the art. It would have been obvious to one of ordinary skill in the art to store the data according to a circular addressing manner because such an arrangement has been common practice in the art as a means for allowing easy storage and retrieval of data.

With regard to claim 18, Davis et al. teaches that the receiving computer system replaces only the received segments that had originally been received in error (column 4, lines 59-61); the receiving computer system therefore inherently checks whether the portions of the received retransmitted data packet had been requested.

With regard to claim 19, Davis et al. fails to teach that two buffers are used at the transmitting computer system, wherein one buffer is used for data that is to be transmitted for the first time, and the other buffer is used for data that is to be retransmitted. Davis et al. teaches,

however, that initial transmissions and retransmissions take place on two independent links so that they do not interfere with one another (column 3, lines 58-61). It would therefore have been obvious to one of ordinary skill in the art to modify the invention of Davis et al. so that two buffers are used at the transmitting computer system, wherein one buffer is used for data that is to be transmitted for the first time, and the other buffer is used for data that is to be retransmitted, because such an arrangement would allow the initial transmissions and retransmissions to take place without interfering with each other.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato, MacDonald et al., Klemets et al., Malkamaki etal., Miller et al., Hamano et al., Maeda et al., and Yoshida et al. are cited to show the state of the art.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Logsdon whose telephone number is (703) 305-2419. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 308-6743

For informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Joe Logsdon

Patent Examiner

July 12, 2001

HASSAN KIZOU
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